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CENTRAL INTELLIGENCE AGENCY

# INFORMATION REPORT

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SUBJECT Budënnyy Electric Locomotive Plant in Novocherkassk

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THIS IS UNEVALUATED INFORMATION 25X1

1. The Budënnyy Electric Locomotive Plant was about 6 km north-northwest of Novocherkassk (47°24'N/40°06'E) on the double-track railroad line to Shakhty (47°46'N/40°12'E). The plant had a spur track to the main railroad line. The spur track branched into three tracks within the plant area. The eastern track had an electric overhead line and was used for test runs of the electric locomotives produced in the plant.

2. Some buildings of the plant including the forge, the boilerhouse, the tool department, and the repair shop were destroyed during the war. Ninety percent of the installations were dismantled and evacuated to the Urals. The plant has been under reconstruction since 1945. Most of the equipment was replaced by dismantled German equipment from the AEG Electric Locomotive Plant in Berlin-Hennigsdorf (N 53/K 76), by some machines from the Borsig Plant and the Pittler Plant in Leipzig (N 52/K 69), and by a few Japanese, American, and Soviet machines. The expansion and reconstruction of the plant buildings was not completed by late 1949. Part of the mechanical equipment was therefore, stored in the plant area.

3. Incoming raw material shipments consisted of red iron ore from Krivoy Rog (47°54'N/33°21'E), of which allegedly 1,750 tons were shipped in 1949; scrap; copper sheets; copper wire; and coal from the Shakhty area. Incoming shipments of component parts included electric motors from the Dynamo Plant in Moscow, electric equipment and miscellaneous accessories from the Electro-Technical Plants in Kharkov (50°00'N/36°15'E) and Leningrad (59°55'N/30°15'E). Since the spring of 1949, most of the electric motors for locomotive construction have been produced in the plant itself.

4. Electric power was allegedly supplied by the power plant near Shakhty, 25X1 25X1 it came from Rostov (47°15'N/39°53'E) through a plant-owned transformer station consisting of six open-air transformers. The transformer station was located in the northeastern part of the plant. In the summer of 1949, the walls surrounding the plant were extended to enclose the transformer station. In 1949, the power requirements of the plant were allegedly 4,000 kw. Power interruptions were frequent. The construction of a plant-owned auxiliary power station was scheduled and a PW architect was ordered to draw up the building plan. However, construction had not started by late 1949. There was an additional power unit for direct current in the compressor



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station, used to supply the electroplating installations.

5. The plant repaired electric locomotives until early 1947 and then started to produce electric locomotives. The monthly production consisted of one locomotive in March 1947, four locomotives in late 1947, and from six to eight locomotives in 1948. In 1949, from 8 to 14 locomotives were produced monthly, i.e. 32 locomotives from January to April, 35 locomotives from May to August, 55 locomotives from September to December, making a total of 122 locomotives produced during the year. The monthly output was scheduled to be increased to 20 locomotives in 1950. After the completion of the reconstruction and expansion work and after installing all the necessary mechanical equipment, the production rate was scheduled to be increased to one locomotive daily by early 1951. In 1949, the plant produced only the VL 22 type freight train electric locomotive with the following specifications: weight 132 tons, length about 16 meters, 6 axles, 6 motors with working voltage of 1,500, and an output of 400 kw each, totaling 2,400 kw. The maximum speed was about 70 km/h. [redacted] the electric locomotives were shipped to the Urals, the Caucasus, Moscow and Stalinsk-Kuznetsk (53°47'N/87°10'E). New types of locomotives were allegedly continuously developed in the technical designing office, but the plans were not carried out. Only some minor improvements were made in the construction of the VL 22. 25X1

25X1 6. [redacted] the plant had about 5,000 employees in September 1949. Thirty-five to forty percent of the employees were women. In addition, 400 PWs worked in this plant, with about 200 of them working in the production department. Work was done in three shifts in the most important production departments. About 2,000 employees worked in the shift from 8 a.m. to 4 p.m., about 2,000 worked in the shift from 4 p.m. to midnight, and about 1,000 worked in the shift from midnight to 8 a.m. There were also about 1,000 construction workers working in two shifts on the reconstruction of the plant. Most PWs were discharged from the plant prior to late 1949. When the AEG Plant in Berlin-Hennigsdorf was dismantled, the department chief for field railroads (sic), graduate engineer Dr. Kreuter (fnu), was sent to the U.S.S.R., where he was employed in a leading position in the Novocherkassk Locomotive Plant. [redacted] 25X1

25X1 [redacted] Kreuter was dismissed in 1951 and is now employed at the LEW (Locomotive Electrical Engineering Plants) in Berlin-Hennigsdorf.

7. The plant area was surrounded by a 2-meter high wall reinforced with barbed wire, and with four or five watchtowers. The plant was guarded by plant militia armed with carbines. Guards were always on duty at the plant entrance and at the fuel dump. In 1949, the plant militia was [redacted] being trained in the use of the 76-mm gun, the 45-mm AT gun, and the 82-mm mortar, outside the plant area. 25X1

25X1 * [redacted] Comment. For layout sketch of the plant, see Annex. [redacted] 25X1

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„BUDENNYY"

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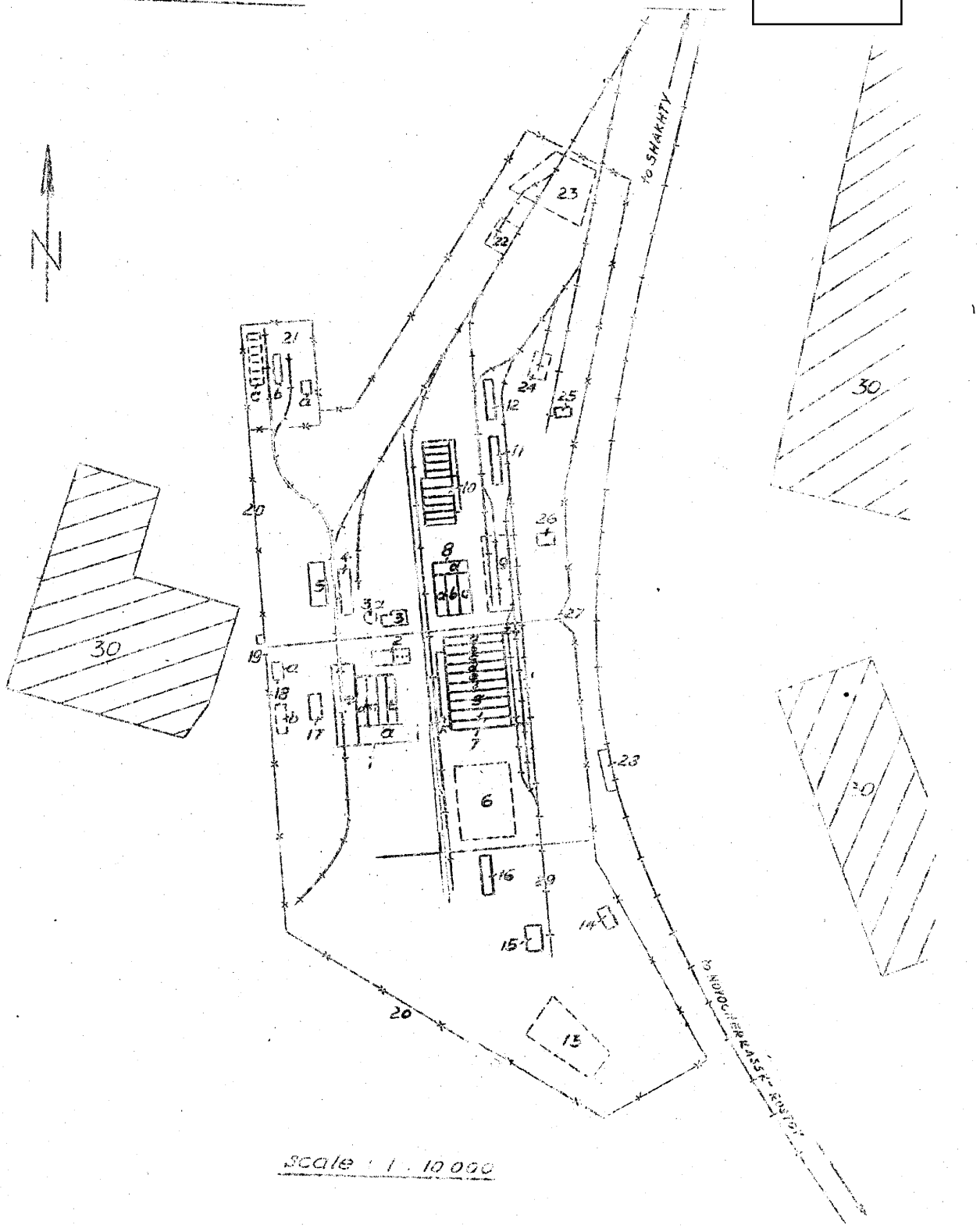
LEGEND : see next page




Scale : 1 . 10 000

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Legend:

1. Foundry, a brick building, divided into several longitudinal sections.

   a. Nonferrous-metal foundry and molding shop for small parts, equipped with 1 foundry furnace for nonferrous metals with a capacity of about 300 kg, and 1 aluminum furnace with a capacity of about 150 kg. This foundry cast bearing boxes, bow trolleys (Strombuegel), bronze and aluminum parts. There was also a casting cleaning shop.

   b. Molding shop for large castings, equipped with German molding machines with a roller bed (Rollgang).

   c. Foundry department for large castings, equipped with 3 Siemens electric furnaces with a capacity of about 3 tons each, and 2 crane installations with a capacity of about 5 tons each. This foundry cast motor casings, parts of locomotive undercarriages, locomotive wheels, and miscellaneous component parts.

   d. Extension building. It was not equipped in 1949.

   e. Sand preparing installation and scrap dump.

2. Boiler house. It was destroyed during the war and resumed operation in autumn 1947. There were three coal-fired boiler installations. It had 3 smokestacks, about 50 meters high.

3. Compressor station and pumping installation, equipped with 2 AEG compressors to supply compressed air for the plant. The water pump installation was used to pump drinking water from Novocherkassk to the plant. Water used for other purposes in the plant was also pumped through a feed pipe from the river. In the eastern part of the building was an electroplating department, equipped with a D.C. power unit.

   a. Water tower.

4. Fitting shop and plumbing shop.

5. Pattern-making shop, equipped with various woodworking machines. This shop produced patterns for the foundry and woodwork for locomotive construction.

6. New building, allegedly the department for production of electric motors and equipment for locomotive construction. It was divided into ten longitudinal sections. The construction of the building started in the spring of 1948. The brickwork was completed in the autumn of 1949. An extension to the north of this building was scheduled to be erected in 1950.

7. Main production and assembly department.

   a. Body and frame construction shop, equipped with electrically operated plate shears, drilling machines, lathes, electric welding apparatus, and a crane installation.

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b. Workshop for the construction of undercarriages.

c. Workshop for the assembly of undercarriages, equipped with planing machines, vertical milling machines, vertical drilling machines, boring-and-turning mills, and a crane installation.

d. Fitting shop and plumbing shop, equipped with turret lathes, threading machines, circular saws, pipe bending machines, electric annealing furnaces, and a crane installation. Bow trolleys, pipe lines and other items for the locomotive construction were produced in this shop.

e. Sheet-metal department and welding shop, equipped with sheet-metal bending machines, presses, drilling machines, sheet-metal shears, electric welding apparatus, and a crane installation. Boilers for compressed-air installations were produced here.

f. Department for electric fittings, equipped with lathes, shaping machines, milling machines, and steel saws. Electrical equipment for locomotives was produced here.

g. Machine shop and latheshop, equipped with turning-and-boring mills for processing locomotive wheels, lathes and grinding machines for processing axles and shafts, milling machines for cogwheels, slotting and planing machines, one electric furnace with a hardening installation, one machine for mounting the wheel sets, and a crane installation.

h. Electric motor department, equipped with one press, punches, grinding machines, lathes, planing machines, armature winding machines, annealing furnaces, and test stands. Component parts were produced and electric motors for locomotives were assembled here.

i. Final assembly and varnishing shop. Two tracks passed through this shop. It had two cranes with carrying capacities of 120 tons and 50 tons respectively. It was possible to assemble six locomotive at a time.

k. Administrative office and technical designing office.

8. Forge. It was demolished during the war and was reconstructed by October 1948. Locomotive frame parts, axles, shafts, connecting rods, bolts and springs were produced here.

a. Plumbing shop and punching shop. In the autumn of 1949, a small sheet-metal rolling installation was set up here.

b. Forge, equipped with 2 coal-fired furnaces, 2 annealing furnaces, 6 small oil-fired forge furnaces, one 100-ton press, one 1,500 kg hammer, one 1,000-kg hammer, and two 500-kg hammers.

c. Welding shop, equipped with 2 autogenous cutting machines and electric and autogenous welding apparatus.



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d. Office, and storage rooms.

9. New building with two tracks. It was completed in late 1949 and was equipped with machine tools, pneumatic hammers and electric welding equipment. The workshop was allegedly scheduled to be used for the final assembly of bodies for electric locomotives.

10. Tool department and repair shop. It was reconstructed and equipped in late 1949. In the southern part of the workshop were the tool making shop and the repair shop for plant-owned electric motors. In the northern part were workshops for other plant repairs.

11. Warehouse, where dismantled equipment and machines were stored.

12. Depot and workshop for insulating material, and insulators. The bakery was also in this building.

13. Storage place for lumber and building materials.

14. Slag stone factory, in which slag blocks and concrete roofing slabs for plant construction were produced.

15. Sawmill, equipped with one frame saw.

16. Carpentry shop and fitting shop for plant requirements.

17. Electric repair shop.

18. Oxygen department. Its daily production consisted of about 30 bottles of oxygen used for autogenous welding.

a. Production building with one compressor installation for filling oxygen bottles.

b. Storage place for oxygen bottles.

19. Western entrance with guardhouse.

20. Two-meter high wall, reinforced with barbed wire.

21. Transformer station with long-distance transmission lines to Novocherkassk and Shakhty.

a. Administration building.

b. Transformer station.

c. Six open-air transformers. In the summer of 1949, a new 3-phase aluminum line on steel masts leading to Novocherkassk was put into operation.

22. Tank depot with 7 tanks which were half sunk into the ground. Fuel, oil, fats and dyes were stored in the tanks.

23. Coal, iron and scrap dump.

24. New varnishing and spraying shop. It was still under construction in late 1949.

25. Switchboard, radio station, garage and fire control tower.

26. Plant fire brigade with two fire engines.

27. Main entrance and guardhouse.

28. Plant railroad station.

29. Tracks with electric overhead line for test runs of electric locomotives.

30. Residential buildings.